

REMARKS

The present Amendment amends claims 1-4, 6 and 9 and leaves claims 5, 7, 8, 10 and 11 unchanged. Therefore, the present application has pending claims 1-11.

Applicants respectfully request the Examiner to contact Applicants' Attorney, the undersigned, by telephone so as to schedule an interview to discuss the outstanding issues of the present application prior to examination.

Claims 1, 4 and 9 stand rejected under 35 USC §112, first paragraph as allegedly failing to comply with the rewritten description requirement. Particularly, the Examiner alleges that the claims contain subject matter which was not described in the specification in such a way so as to reasonably convey to one skilled in the relevant art that the inventors at the time the application was filed had possession of the claimed invention. This rejection is traversed for the following reasons. Applicants submit that the specification as originally filed fully complies with the rewritten description requirement of 35 USC §112, first paragraph and contains information sufficient to reasonably convey to one skilled in the relevant art that the inventors at the time the application was filed had possession of the claimed invention. Therefore, reconsideration and withdrawal of this rejection is respectfully requested.

In the Office Action the Examiner alleges that the limitations:

"response to a unit name at data received from said host from one of said storages upon reception of the unit name of said data from said host, as in claim 4, responds to a file name in said first format from one of said storages upon reception of a file name in said first format from said host, and claim 9, responds a file name and data received from said host from one of said storages upon reception the file

name of said data from said host were not described in the specification".

The above described limitations of the present invention are clearly discussed in the specification beginning on page 9, line 16, through page 21, line 24. Specifically, the above noted passage of the present application describes on page 20, lines 13-15 that:

"the operator will ask the SAN-FM the operation request on the file A by adding the file name of the file A (K-2) to the SAN participant ID".

Further, the above noted passage of the present application specifically describes on page 21, lines 12-21 that:

"the operator A will send the file A operation request to the RAID A with the route information and the received file A operation ID (K-3) to obtain the file A that allocated to the virtual space. Thus, obtained file A will be checked by the SAN participant ID (K-1) and converted the file type and/or decoded to a file format operable in the file system (FS) specific to the host A. The conversion here means the file wrap by the file directory in the SAN format, which is indicated in Fig. 12 by a circle surrounded by a polygon will be decoded to a file of the file type specific to the host A, shown by only a circle in Fig. 12. In this manner an application program on the host A is allowed to operate on the file".

Thus, as is quite clear from the above noted passage of the present application as originally filed, the limitations noted by the Examiner are fully and completely supported and described in the specification as originally filed. Therefore,

reconsideration and withdrawal of the 35 USC §112, first paragraph rejection is respectfully requested.

Claims 1-11 stand rejected under 35 USC §103(a) as being unpatentable over O'Connor (U.S. Patent No. 6,564,228) in view of Dang (U.S. Patent No. 5,446,855). This rejection is traversed for the following reasons. Applicants submit that the features of the present invention as now recited in claims 1-11 are not taught or suggested by O'Connor or Dang whether taken individually or in combination with each other as suggested by the Examiner. Therefore, Applicants respectfully request the Examiner to reconsider and withdraw this rejection.

Amendments were made to each of the independent claims so as to more clearly describe features of the present invention. Particularly, amendments were made to the claims to more recite a data management system for storages, suitable for a system having a host and a plurality of storages connected to a data transfer network. According to the present invention, the data management system includes a converter facility provided in the host for converting, for example, a unit of data specific to an operating system on the host into a unit of data common to the storages or alternatively converting files in a first file format having a file format specific to the operating system into files in a second format having a file format common to the storages.

The data management system further includes a management facility connected to the data transfer network for receiving a name of a unit of data common to the storages from the host and managing a readout of the unit of data common to the storages in response to the unit name received from the host from one of the storages.

Alternatively, the management facility receives a file name of a file in the first format from the host and manages a readout of files in the second format in response to the file name in the first format from one of the storages.

Further, according to the present invention, each of the storages includes a storage device for storing data and a controller for controlling data sent from the host through the data transfer network so as to assign the data to a virtual space and store the data assigned to the virtual space in the storage device.

By use of the above described features of the present invention now more clearly recited in the claims it is possible to transfer data freely among the storages without having to be aware of or perform functions so as to relate a file format of the host computer with the file format stored in the storages. This feature of the present invention is discussed on page 6, lines 15-18 of the present application.

The above described features of the present invention now more clearly recited in the claims are not taught or suggested by any of the references of record specifically O'Connor and Dang whether taken individually or in combination with each other as suggested by the Examiner.

Specifically, O'Connor does not teach or suggest the features of the present invention as now more clearly recited in the claims. O'Connor teaches a method of enabling heterogeneous platforms to utilize a universal file system (UVFS) in a storage area network. Specifically, O'Connor teaches that technology related to a UVFS is installed in the host computer so as to allow the host computer to access a UVFS storage device. However, these teachings of O'Connor do not anticipate nor render

obvious the features of the present invention as now more clearly recited in the claims as described above.

In the Office Action the Examiner made numerous incorrect allegations with respect to the teachings of O'Connor. Particularly, the Examiner alleges teachings in O'Connor which could not be found by Applicants. Contrary to the Examiner's allegations, Applicants found that O'Connor fails to teach or suggest or provide any description concerning:

- "(1) the management of data with a unit of data common among a plurality of storages;
- (2) the management facility for managing data common among a plurality of storages; and
- (3) the fact that such a management facility is an apparatus different from the host computer and a plurality of storages".

Even beyond the above noted complete lack of teachings to support the Examiner's allegations in the Office Action, O'Connor is deficient of any teaching of numerous other features of the present invention as now more clearly recited in the claims.

For example, O'Connor fails to teach or suggest an arrangement for managing data according to a unit of data common among a plurality of storages as recited in the claims. The management described by O'Connor is a technology different from the present invention as recited in the claims.

In the present invention, a free transfer of data becomes possible among a plurality of storages without having any relation between a file format of the host computer under utilization of the management facility of the host computer and a file

format common to a plurality of storages because the data is managed with a unit of data common among a plurality of storages.

Contrary to the present invention, in O'Connor, it is necessary to install as many file systems as the types of respective storages in each of the host computers because the cited document has no management facility for managing such relation as in the present invention as recited in the claims. This difference between the features of the present invention and O'Connor is illustrated in the description of O'Connor concerning Fig. 5 in column 6 lines 5 to 13.

Further, O'Connor does not provide a management facility different from the host computer and a plurality of storages so as to manage data according to a unit of data common among a plurality of storages as in the present invention. Thus, in O'Connor it becomes necessary to change all the storages into UVFS storages to enable all the storages to be utilized through the host computer which itself must be a UVFS host computer.

The present invention as recited in the claims is operated such that an access from the host computer is managed through the management facility different from the host computer, so that even if accesses from the host computer concentrate on data common among a plurality of storages, for example, it becomes possible to perform efficient exclusive control thereof. However, in O'Connor there is no such construction as in the present invention as recited in the claims. Therefore, O'Connor cannot adapt to a situation in which accesses are performed by a plurality of host computers to specific data as in the present invention.

Therefore, as is quite clear from the above, the features of the present invention as now more clearly recited in the claims are not taught or suggested by O'Connor.

The above noted deficiencies of O'Connor are not supplied by Dang. Therefore, combining the teachings of O'Connor and Dang in the manner suggested by the Examiner still fails to teach or suggest the features of the present invention as now more clearly recited in the claims.

The Examiner merely relies on Dang for an alleged teaching of a controller for allocating a data which is transferred through the data transfer network to a virtual space and storing the data allocated to the virtual space in the storage device.

In the Office Action, the Examiner points to various teachings in Dang for the above described features. However, these teachings in Dang do not disclose the matter as alleged by the Examiner and as such causes Dang to not supply teachings corresponding to the deficiencies of O'Connor. Thus, even if Dang is combined with O'Connor in the manner suggested by the Examiner, the combination would still be deficient of numerous features of the present invention as recited in the claims shown above to not be taught or suggested by either O'Connor or Dang.

Therefore, combining the teachings of O'Connor and Dang in the manner suggested by the Examiner still fails to teach or suggest the features of the present invention as now more clearly recited in the claims. Accordingly, reconsideration and withdrawal of the 35 USC §103(a) rejection of claims 1-11 as being unpatentable over O'Connor in view of Dang is respectfully requested.

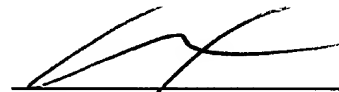
The remaining references of record have been studied. Applicants submit that they do not supply any of the deficiencies noted above with respect to the references utilized in the rejection of claims 1-11.

In view of the foregoing amendments and remarks, Applicants submit that claims 1-11 are in condition for allowance. Accordingly, early allowance of claims 1-11 is respectfully requested.

To the extent necessary, the applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, or credit any overpayment of fees, to the deposit account of Antonelli, Terry, Stout & Kraus, LLP, Deposit Account No. 01-2135 (520.39555X00).

Respectfully submitted,

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